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AMPHIBICO
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PHENOM NX5 SE

Instruction Manual
Video Camera Housing for
SONY® HXR-NX5 & SONY® HDR-AX2000

Before operating the unit, please read this manual carefully. Keep it for future reference.

WARRANTY

Please take time to register your product on line at the following secure WEB site "www.amphibico.com". This way your product will be recorded in our data base in case it gets lost or stolen. It also allows us to contact you in the unlikely event that a safety notification is required on your product. This on line product registration eliminates the need for you to fill out the warranty card that was supplied with your Amphibico product.

All Amphibico products are guaranteed against defects in material or workmanship for two full years from the date of purchase for consumer use. These same products when used commercially will carry a 90-day warranty. No statutory warranty applies. Cameras housed in Amphibico housings are not covered under this warranty and ANY WATER DAMAGE SUSTAINED DUE TO INSTALLATION ERROR OR FOR ANY OTHER REASON IS NOT THE RESPONSIBILITY OF AMPHIBICO INC. Therefore the appropriate insurance should be maintained by the user.

Subject to the terms and conditions specified hereunder, Amphibico Inc. agrees to correct, either by repair or by replacement, any defect in material or workmanship which develops within one year after delivery of the product to the original purchaser.

Repair or replacement is provided in the event that investigation and factory inspection by Amphibico Inc. discloses that such a defect has developed under normal and proper use. No warranty is granted concerning components, accessories, or devices not manufactured by Amphibico Inc.

AMPHIBICO INC. SHALL BE RELEASED FROM ALL OBLIGATIONS UNDER ITS WARRANTY IN THE EVENT REPAIRS OR MODIFICATIONS ARE MADE BY PERSONNEL OTHER THAN ITS OWN OR AUTHORIZED (IN WRITING) SERVICE PERSONNEL.

Amphibico Inc., in its continued commitment to provide excellence in the field of underwater imaging, reserves the right to change specifications at any time, without notice and without incurring any obligations to incorporate new features in equipment previously sold.

CONDITIONS

Registration: The attached (warranty) card must be filled out and mailed to Amphibico Inc. within fourteen (14) days after retail purchase.
Repairs: The unit must be returned freight prepaid to Amphibico Inc. The returned documents must show Serial N0. and be marked " CANADIAN GOODS RETURNED." No returns will be accepted without Amphibico Inc return authorization number.

PHENOM NX5 SE

Marine housing for the Sony HXR-NX5 & HDR-AX2000

Amphibico's robust PHENOM housing has now been adapted to fit the SONY® HXR-NX5 and the SONY® HDR-AX2000 Digital HD Video Camera Recorders and continues its impressive run as a premium choice for those that call themselves professional. Given the proven track record in the reliability of the PHENOM FXZ1 we have added the new full 2 year Amphibico warranty.

This full featured housing will provide access to all key camcorder functions to depths of 330 feet (100 meters). Amphibico's high quality full zoom-through 94° optics (optional) will complement the package.

FEATURES

- o 14 Electronic push button controls
- o Power On/Off
- o Record/Standby
- o Variable speed zoom T/W
- o Fast zoom T/W
- o Variable manual focus
- o Momentary AF
- o Toggle between Manual and Auto Focus
- o Expended focus
- o "One Push" A & B manual white balance or WB preset
- o Shutter speed adjustment
- o IRIS (Auto / Manual), full control
- o Momentary IRIS
- o Gain adjustment
- o Screen Display
- o Access to the camcorder's menu
- o Playback mode
- o Flashing Green Tally Light when Recording
- o Electronic Moisture Sensor Alarm
- o Access to 5 out 6 assign buttons
- o Picture profile

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General Shooting Tips

1. Best results will be obtained with natural light if the sun is directly overhead during calm water periods.

2. Placing the sun behind your shoulder during shooting will produce the best colors.

3. Wide angle is the preferred focus setting for best results with subject, as close as possible to the housing. This will reduce the water column and the amount of particles between subject and lens.

4. Zooming during shooting is not recommended unless absolutely necessary as telephoto will magnify particles. Swimming toward subject is a much more visually pleasing filming method.

5. Use image stabilizer if available on your camera when filming macro to minimize camera movement during high magnification. Image stabilizer is not as critical while using wide angle and will use battery power unnecessarily.

6. Buoyancy control is one of the most important aspects of underwater videography and diving in general. Avoid disturbing bottom silt and contacting delicate reef structures. Work on controlling your breathing and your buoyancy. Your video will be much more visually appealing. You are trying to make yourself a steady shooting platform. The less movement you make , the better your video will be. Work on attaining a comfort zone underwater. The more comfortable you are underwater, the more controlled your breathing will be and the steadier your video will be.

7. In low light situations, add light with optional Amphibico video lights for brighter and more vibrant colors. As light level falls so does color saturation. Lights will also provide necessary fill during daylight shooting. If this technique is used, filtration of light using a color correction filter will be necessary for accurate color rendition.

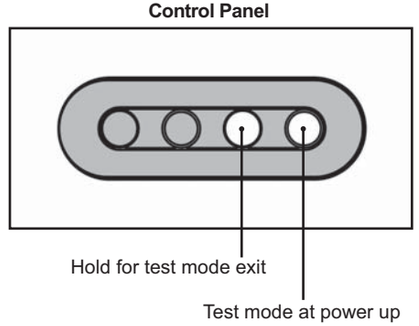
Audio Tips

To eliminate any faint background noises which may come from an internal device, it is recommended to switch the audio settings of CH1 on your camcorder from auto to manual. The audio level for CH1 should be set anywhere between 3 and 4 once in manual mode.

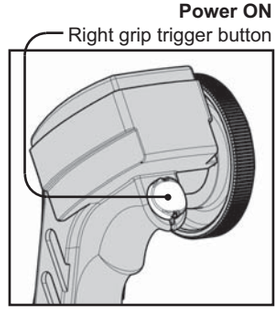
Trouble Shooting

The PHENOM marine housing is equipped with a built in diagnostic test mode. To activate it, simply push and hold one of the buttons on the control panel as shown bellow while turning on the unit with the right grip trigger button. Once activated, you can test all the push buttons and wheels to see if the function properly. Pushing a button or turning a wheel will light up a different indicator light making it either red or green. Push and hold one of the buttons on the control panel as shown bellow to exit diagnostic test mode.

Control Panel



Power ON



The PHENOM offers an array of accessories and they are as follows:

- Large carry case with casters and handle

- Optics
  - Dome Port Lens Adapter
  - Flat Port Lens Adapter
  - 0.68x, 94º Wide Angle lens adapter with full zoom-through capability.

- Lights*
  - NEW Discovery G3 35/50 Watt “HID” Technology Arc Light with aluminum Extension Arm
  - 10 Watt Arc Light "HID Technology" with mounting arm

- 16:9 High Definition 4.3" Color LCD Monitor
- 3.5” Standard LCD Monitor

- WB/Color chart slate
  - 7" x 11" slate
  - 11" x 17" slate. Offered with an optional branding to personalize your slate

- Audio & Video output cables (call in for details)

* Discovery G3 arc lights have a self contained power pack and do not require an external power source unlike the older generations.

Before unpacking your housing kit, inspect the shipping box as well as all contents for damage during shipping.
If damage has occurred, please contact the shipping company immediately.

Every Amphibico Housing is pressure tested prior to shipping. However, damage may have occurred during shipping.
It is strongly recommended to test dive the housing once without camcorder installed to insure the housing is water tight.

This instruction manual assumes that the user is already familiar with the SONY® HXR-NX5 or the SONY® HDR-AX2000 camcorders.
If not, please read instruction manuals thoroughly before beginning to use the housing.

Your PHENOM NX5 SE underwater housing comes to you as follows:

A) Marine Housing

B) Optional mounted lens
(neoprene cover included with 94º only)

C) Removable / lockable camcorder saddle
(shipped in its position inside the housing)

D) Neoprene cover for the rear viewfinder

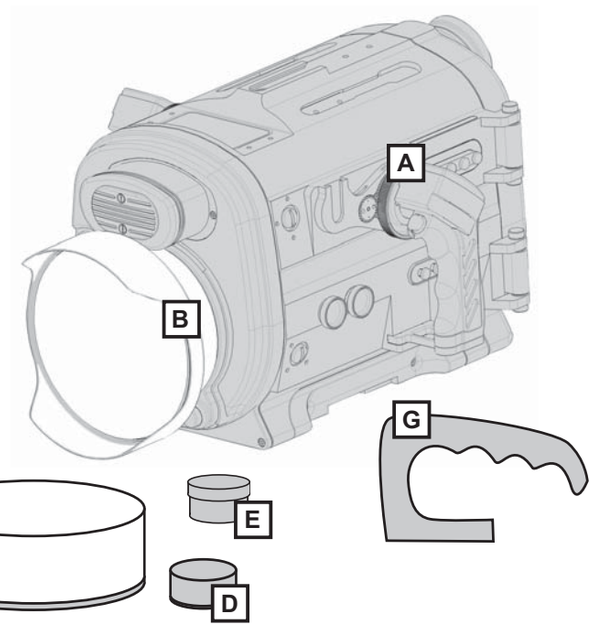
E) O-ring kit with container of silicone grease

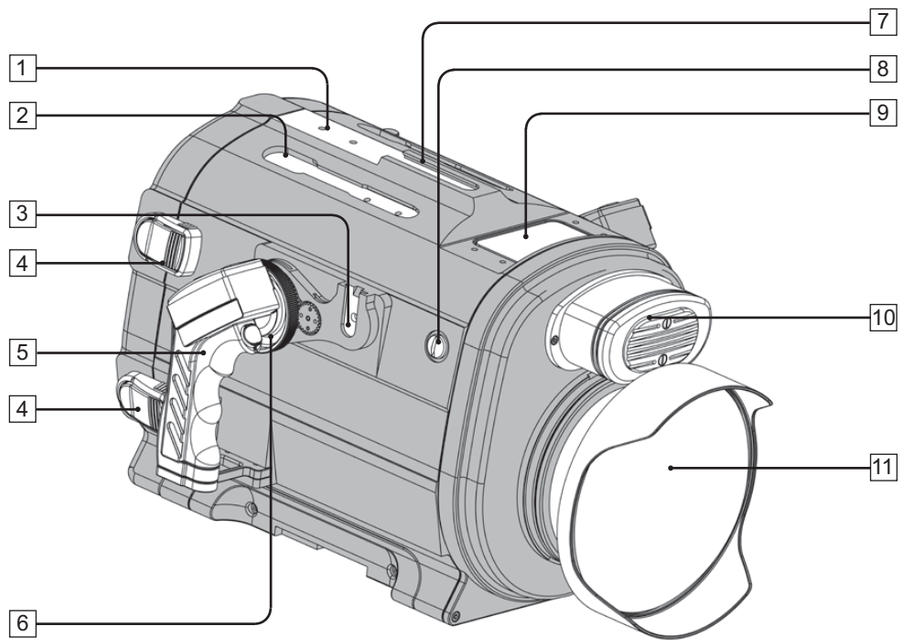
F) Instruction manual and warranty card

G) Carry Handle

I) Allen Key 1/8" (for carry handle)

J) Allen Key 1/16" (for lead ballasts)





1 Accessory Mounting Holes
2 Accessory Mounting Top Rail
3 Accessory Mounting Side Rail
4 Safety Latch
5 Right Electronic Grip
6 Zoom Wheel
7 Carry Handle Mounting Rail
8 Auxiliary Port
9 LCD Display Window
10 Dual Hydrophone
11 Bayonet Mount Wide Angle Lens Port (optional)

PHENOM
Marine housing for the Sony HXR-NX5 and the Sony HDR-AX2000

- Marine grade aluminum Construction
- Fully anodized with a hard coat of polyurethane paint and a clear coat
- All hardware is marine grade brass and stainless steel
- Optics: Marine bayonet mounted lens system, 0.68X rectilinear fully coated amphibious conversion lens. (optional) Full zoom-through capability, 94° field of view underwater and vacuum-sealed for maximum anti-fog protection
- Sensitive Dual Hydrophones to pick up high frequency sounds, such as whales and dolphins
- 2.5 x Magnified viewfinder with adjustable diopter control
- 2 Auxiliary ports

Weight of unit :
- On land 36 lbs. (16.3kg) fully loaded w/camera NP-F770 battery, wide angle lens and lead ballasts.
- In freshwater and seawater the PHENOM can be perfectly balanced and neutral in buoyancy by trimming the lead ballasts.

Dimensions :
- Length 18.3" (465mm)
- Width 13.6" (345mm)
- Height 10.1" (257mm)
- Measurements includes lens and grips

Operating depth :
- Each unit is pressure tested to 330ft (100m)

WARNING: DO NOT leave the housing exposed to direct sunshine, as extreme heat condition can be detrimental to certain of its components.

1. Keep housing and o-rings away from direct sunlight. Always store unit when possible away from direct sunlight as this can dry out and crack o-rings in the housing. Ultraviolet rays can damage plastics, paint and o-rings.

2. Always rinse or soak closed housing in fresh water for 10 to 15 minutes after every use. Reach into freshwater and operate all controls to clear salt water. Do not use solvents to clean unit. If preferred, use mild detergent and clean fresh water.

3. Fasteners that are removable should occasionally have the threads lubricated with silicon grease.

4. Rinse clean and remove water spots from external filters and lens surface after every dive or water spots may build up and become impossible to remove. Dry gently with a soft, lint-free cloth.

5. Inspect housing's rear door main o-ring seals (double seals) before every dive. Make sure that there are no cracks or misalignment in the o-ring channel and that no debris is caught on the o-rings.

6. During storage or transit, leave rear door ajar on unit to prevent damage due to extreme high pressure.

SERVICING O-RINGS

1. O-rings and sealing surface should be lightly lubricated with silicon lubricant on a regular basis. This is not necessary after every dive; every tenth dive during regular heavy use is sufficient. This should always be done before storing the housing and before a first dive after taking the housing out of storage.

2. It is important never to use a sharp instrument when removing an o-ring as this may cause damage to the o-ring or the o-ring groove. A hairpin or a credit card works well.

3. The removed o-ring should be examined for damage. Check to make sure that the o-ring is free from nicks and cuts and that it retains its original round profile. O-rings that appear to be damaged should be discarded immediately and replaced with new o-rings.

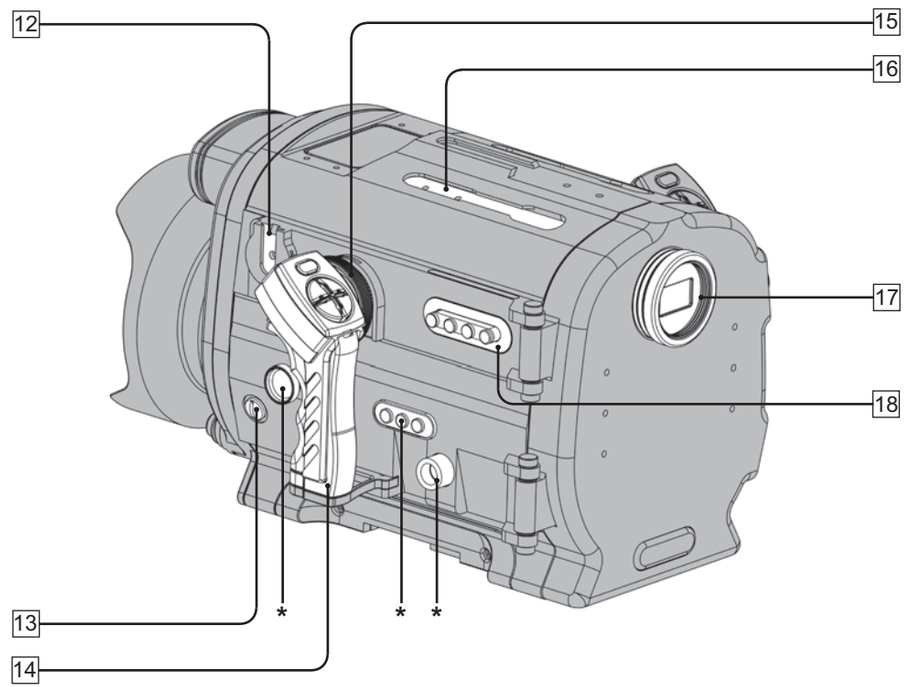
4. Rinse the o-ring with freshwater and dry it with a clean lint free cloth.

5. Clean the o-ring grooves (where the o-rings sit) with a Q-tip. Be sure to remove any lint the Q-tip may leave behind. Inspect the groove for damage.

6. Wipe the part of the housing that the o-ring seals against with a clean lint free cloth.

7. Re-grease the o-rings with a thin layer of silicon grease until it appears to be smooth and shiny. Do not over grease it - use just enough grease so that the o-ring will pull smoothly through your fingers. Excessive amounts will only attract dirt to the o-ring.

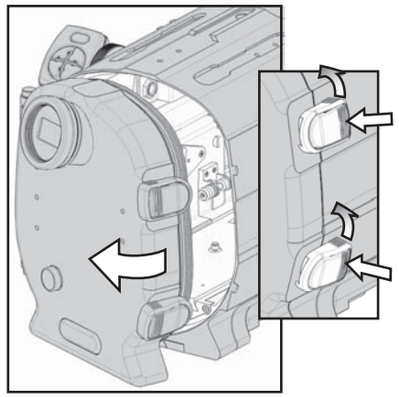
8. Replace o-rings in their proper position on the lens assembly and on the main door seal.



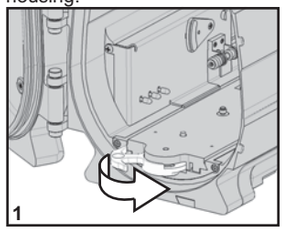
12 Accessory Mounting Side Rail
13 Auxiliary Port
14 Left Electronic Grip
15 Focus Wheel
16 Accessory Mounting Top Rail
17 Viewfinder
18 Control panel

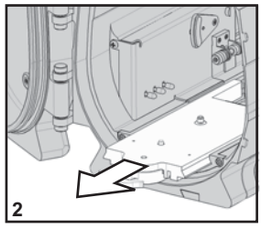
* Not used

OPENING THE HOUSING
Sit the housing on a flat surface. Press and rotate both safety latches counterclockwise simultaneously until the rear door opens.

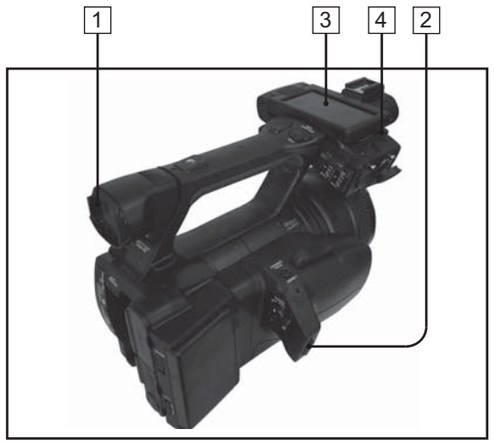


REMOVING THE SADDLE
1. Rotate the saddle locking handle towards the right until it reaches the end. This will disengage the saddle connector.
2. Use the handle to pull the saddle completely out of the housing.





SETTING THE CAMCORDER
1. Remove the eyecup and magnifier element.
2. Remove hand strap
3. Rotate and flip the LCD panel to restore it back to the original position with the LCD screen facing out.
4. Remove MIC Support Holder
- Open support holder to expose the mounting screws.
- Unscrew both screws and remove support holder.
- Replace screws into there mounting holes for safe keeping.
5. Set display output to “ALL OUTPUT” and set all markers to OFF if using an external monitor
6. Set ND FILTER to OFF
7. Set AUTO LOCK switch to the manual.
8. Audio Settings
- Set Input 1 to MIC
- Set CH1 & CH2 TO “INPUT 1”
- Set audio levels to manual and set dial to level 10 for maximum hydrophone performance.

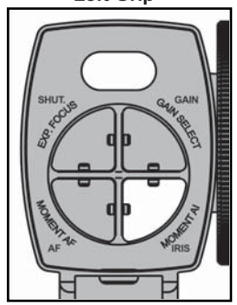


Adjusting the iris
You must first make sure that the iris is set to manual. To do so, push on the left grip IRIS button while holding down the shift key. In manual mode, you can adjust the aperture value of the camcorder by holding down the shift key and turning the right grip wheel. You can also momenta rely auto iris when in manual iris by pushing on the MOMENT AI button located on the left grip.

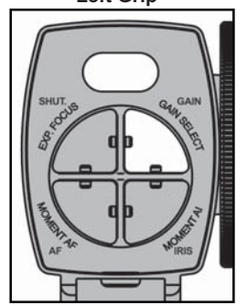
Adjusting the gain
You must first make sure that the gain is set to manual. To do so, push on the GAIN button located on the left grip while holding down the shift key. Once activated, you can adjust the gain by pushing on the GAIN SELECT button located on the left grip to select one of its preset gain levels (H,M,L).

Adjusting the shutter speed
You must first make sure that the shutter is set to manual. To do so, push on the left grip SHUTT. button while holding down the shift key. In manual mode, you can adjust the shutter speed of the camcorder by holding down the shift key and turning the left grip wheel.

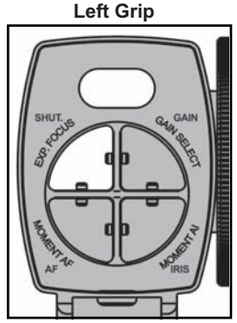
Left Grip



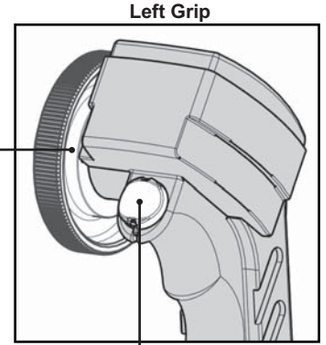
Left Grip



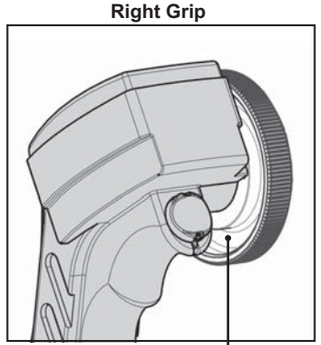
Left Grip



Left Grip

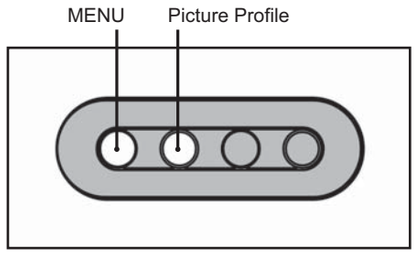


Right Grip

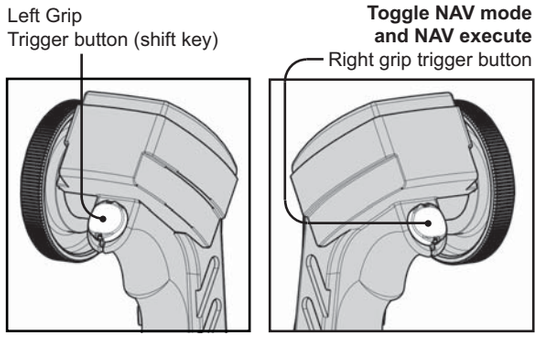


MENU
One of the buttons (shown on the right) on the control panel located on the left side of the unit behind the grip activates and dis activates the camcorder's menu.

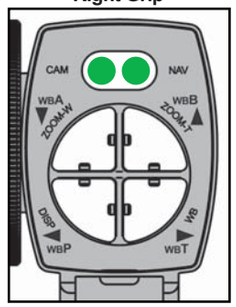
Picture Profile
One of the buttons (shown on the right) on the control panel located on the left side of the unit behind the grip activates and dis activates the camcorder's menu.



Navigation Function (NAV)
To change any of the settings inside the menu or to select a picture profile, you need to activate the navigation function (NAV) first. This is done as follows:
Hold down the shift key while pressing down on the right grip trigger button to activate and dis activate the NAV function. The NAV light indicator will turn on steady green when activated. Use the UP, DOWN, LEFT & RIGHT arrows on the right grip buttons to navigate through the menu. The execute button is the right grip trigger button.

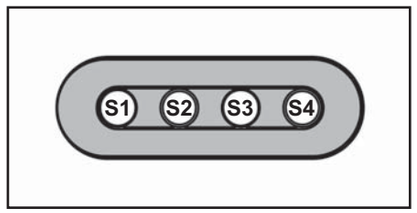


Right Grip



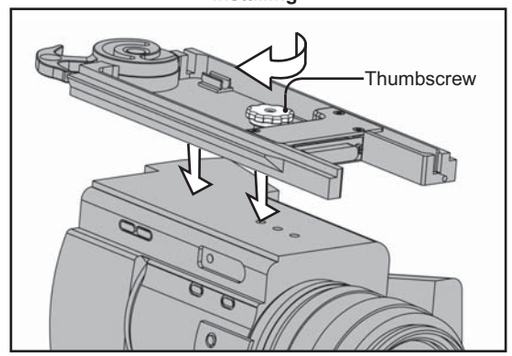
Assign Buttons
You can also access the camcorder's assign buttons via the control panel. The available assign buttons are found on the control panel as follows.
S3: Assign 1
S4: Assign 2
Shift S1: Assign 4
Shift S2: Assign 5
Shift S3: Assign 6

Control Panel



INSTALLING THE SADDLE
Place the saddle under camcorder with its handle pointing the back of the camcorder. Align the thumb screw's saddle and guide pin with the camcorder's tripod mounting holes. Hand tighten the thumb screw to secure the saddle to the camcorder.

Installing

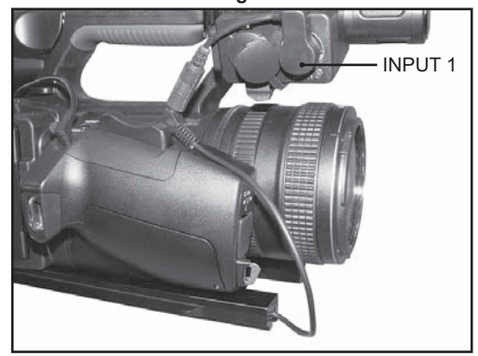


CONNECTING THE SADDLE

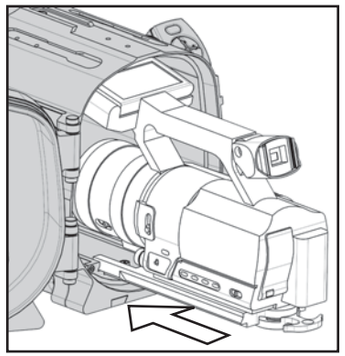
LANC: Connect the cable from the rear of the saddle to the camcorders LANC jack.
AUDIO: Connect the adapter plug (supplied) to the camcorder's INPUT 1 MIC jack. Connect the audio cable from the front of the saddle to adapter plug.
NOTE: It is important to route the LANC and AUDIO cables up and over the camera as shown. This will prevent these cables from getting damaged when inserting the camera into the housing. See Tips & Tricks on page 19 of this manual for additional safety precautions.

Connecting the LANC

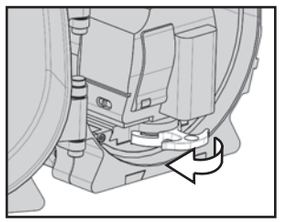
Connecting the AUDIO



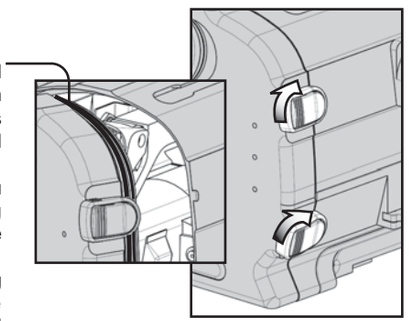
WARNING ! DO NOT PLACE ANY TYPE OF LENS ADAPTER OR LENS FILTER OTHER THAN AMPHIBICO ACCESSORIES ON THE CAMCORDER.
Doing so can cause severe damage to the unit when inserting camcorder into housing.



PLACING THE CAMCORDER INTO THE HOUSING
By now the camcorder is set, installed to the saddle and ready to be placed inside the housing.
1. Turn ON the camera.
2. Line up the camcorder and saddle with the docking tray found inside the housing.
Watch the cables !
3. Begin to insert the camcorder by placing the front of the saddle over the docking tray. This will allow you to better locate the rails on the docking tray.
4. Slide the camcorder all the way until the saddle connector makes contact with the docking tray connector.
5. Rotate the handle on the saddle to secure the camcorder into the housing. This will also guaranty a perfect connection for the saddle connector.



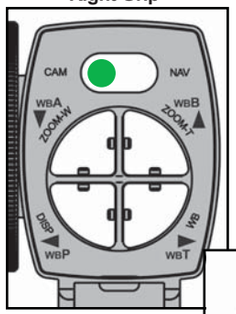
CLOSING THE HOUSING
1. While the housing is open, inspect the two o-rings and the sealing surface for dirt and debris. If necessary, clean them with a lint free tissue. Make sure that the two o-rings and the sealing surface are clean. Then apply a small amount of lubricant (supplied) to the o-rings.
NOTE: If you have to change your o-rings, make sure you are using the o-rings provided with the package. Using different o-rings than those in the o-ring kit may cause the housing to leak and result in damage.
2. Make sure that the LANC cable doesn't block the sealing surface. If that cable gets pinched, the system might be intermittent or not functioning at all. Close the rear door until the latches begin to engage.



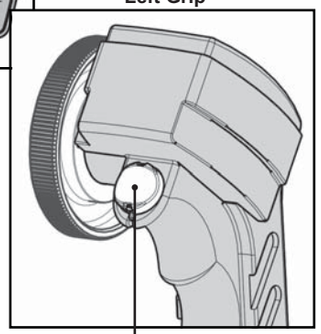
WHITE BALANCE
The capability to white balance underwater plays an important role in achieving good quality footage. This is why the PHENOM offers the "One Push" white balance.

Pressing on the WB button on the right grip while holding down the shift key will allow you to toggle between manual and automatic white balance. Once in manual mode, you can choose between white balance preset, memory A and memory B by holding down the shift key and pressing down on the appropriate button found on the right grip. Use the WB button to store the adjusted white balance value in memory A or B.

Right Grip



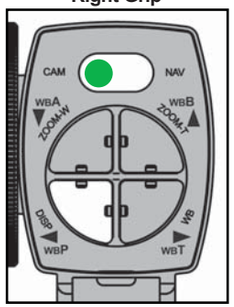
Left Grip



Trigger Button
(shift key)

DISPLAY Toggle
This function allows you to display ON or OFF the camcorder's information in the viewfinder while recording or in playback mode. To access this function, simply press the DISP button on the right grip.

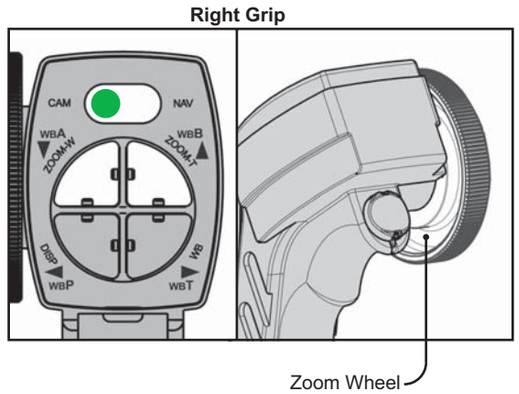
Right Grip



ZOOMING
On the PHENOM, zooming is achieved either with the zoom wheel or the right grip's ZOOM-W and ZOOM-T buttons.

Zoom Wheel
The zoom wheel enables you to vary the zoom speed.

ZOOM-W and ZOOM-T
Located on the right grip, the ZOOM-W and ZOOM-T buttons enables you to zoom through with a constant speed. Pressing on ZOOM-W will widen the zoom while pressing on ZOOM-T will result in the opposite being telephoto.



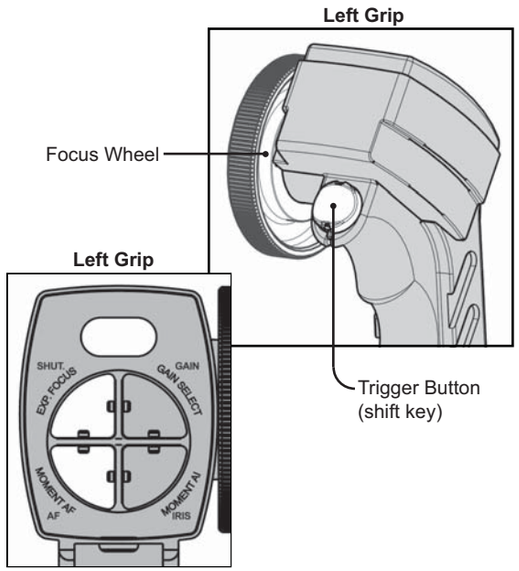
FOCUSING
The camcorder focus on the PHENOM can be set to either auto or manual focus. To toggle from auto to manual focus, press down on the AF TOGGLE button while holding down the shift key.

Manual Focus
In manual focus, you can adjust the focus by using the focus wheel to fine adjust the focus.

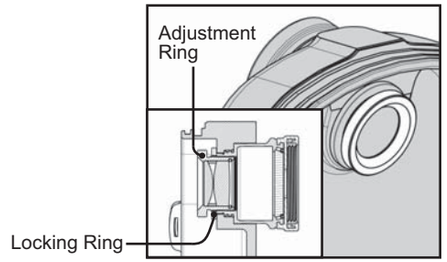
Use the MOMENT AF button (by holding it down) to temporally auto focus. Letting go will return to manual focus.

Expanded Focus
Press the EXP. FOCUS button to magnify the center of the screen when in manual focus. Pressing it again will bring back the screen to its original size.

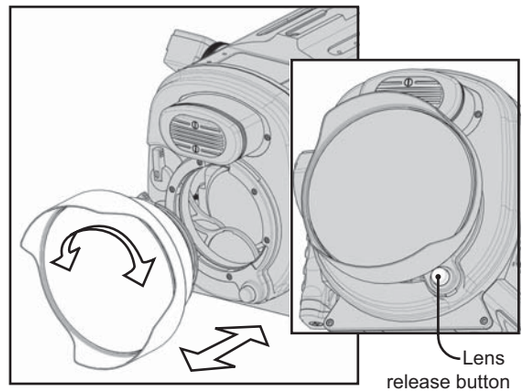
Zoom and Focus Wheel functionality
Both the zoom and focus wheel operate in the same fashion. The wheels are spring loaded and maintain a zero (non active) position when not in use. Applying a little movement on the wheel in either directions will result in a slow speed. Increasing the movement on the wheel will accelerate the speed.



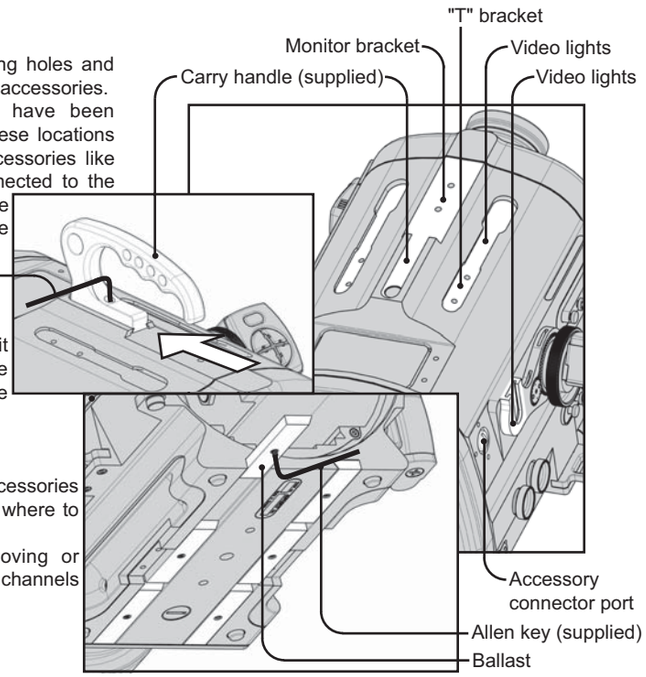
VIEWFINDER EYEPIECE
The viewfinder eyepiece located on the rear of the housing may also need adjustment. To adjust, simply turn the inside ring on the viewfinder CW or CCW to achieve perfect focus with the camcorder viewfinder. Tighten the locking ring up against the viewfinder body to lock the eyepiece in place once adjusted.



REPLACING THE BAYONET LENS
The PHENOM is provided with optional bayonet mounted lenses. In order to protect these optics, covers are provided with the lens.
1. To remove the lens, push and hold the button on the lower right of the front bulkhead and then turn counter clockwise until the lugs are free from the bayonet ring. Pull gently on the lens to release it.
2. Remove the covers from the replacement lens. Place them in a clean and dry environment to avoid any damage. Make sure the seals on the bottom part of the lens are clean and free from dust and debris.
3. Put a small amount of lubricant on the O-ring seals and the sealing surface of the housing.
4. Line up the bayonet lug marked by a hole with the button on the lower right of the front bulkhead. Push the lens all the way in until it sits on the bayonet ring and turn clockwise. You will hear a positive click and the lens will lock into place.



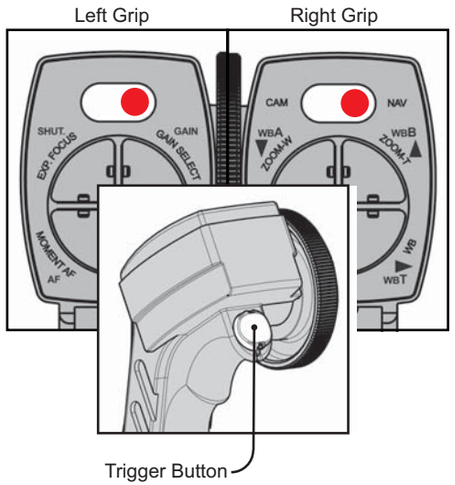
INSTALLING ACCESSORIES
The PHENOM as been equipped with mounting holes and railing systems to accommodate for a variety of accessories. Locations for a few of these accessories have been designated for your convenience. However, these locations can be used for other accessories. Some accessories like the monitor or video lights require to be connected to the housing. Accessory connector ports (one on the right side and two on the left side) are available for this purpose.
Use Allen key (supplied) to tighten handle



Achieving neutral buoyancy and balance
Adding accessories to the housing may make it heavier or off balance in the water. Removable ballasts have been added to the bottom of the housing for this purpose.

To make the necessary weight adjustments.
1. Submerge the housing with the added accessories into the water so you get an idea of what and where to remove weight.
2. Using the Allen key supplied, start removing or relocating the ballasts from the right or the left channels as illustrated.

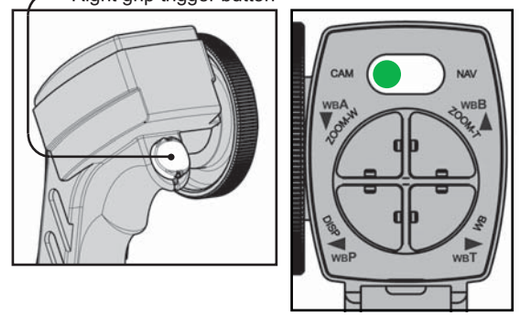
WATER ENTRY
1. Always turn housing to its ON position before entering water. To turn it ON, use the right grip trigger button. This is confirmed by the CAM. indicator light turning on steady green. The camcorder viewfinder will also turn ON.
Doing step 1 will activate the built-in moisture alarm sensor located in the bottom of the housing.
IMPORTANT
The right lights on both grips will start flashing RED if water leakage occurs inside the housing. Remove from water as soon as possible, take the camcorder out of the housing and inspect all seals and the inside of the housing. ALWAYS REMEMBER DIVER SAFETY FIRST.
2. Lower the housing just below the water surface in level position and hold for one minute to confirm there is no leakage in the housing.
Never leap into the water while holding the housing. Always have the housing handed to you or lowered down once you are in the water.
3. Point the lens of the housing upwards and shake off any air bubbles. It may also be necessary to gently wipe the lens with your finger to remove bubbles.



The PHENOM offers a large range of electronic functions. This chapter will explain to you in detail all of these functions.

POWER ON
The camcorder should be powered ON by default after inserting it into the housing. In the event that it's not, the trigger button on the right grip will activate the camcorder. Simply press on it once and the CAM indicator light will turn on steady green and the rear viewfinder will also be turned on to confirm the power ON of the camcorder.

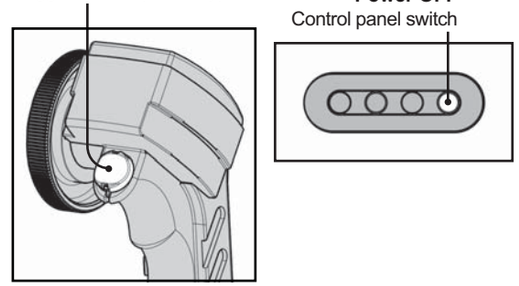
Power ON
Right grip trigger button



POWER OFF
To power off the camcorder during a dive will allow you to save on battery energy. To do so, push and hold the left grip trigger button while pressing down on one of the control panel switch as indicated.

Left Grip
Trigger button (shift key)

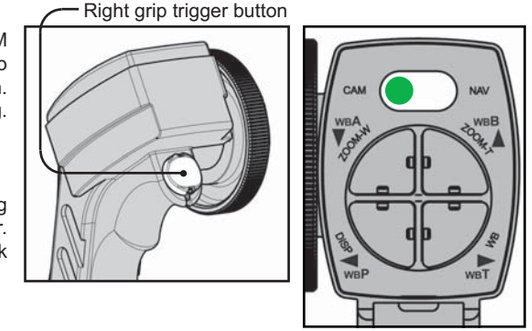
Power OFF
Control panel switch



CAM MODE
The housing will set itself to record/standby mode (CAM indicator LED is steady green) when initially turned ON. To record a scene, simply press on the right grip trigger button. The CAM indicator LED will flash green when recording. Pressing it again will bring it back to record/standby mode.

WARNING
The CAM indicator LED will light steady amber as a warning that there is no recording media present in the camcorder. Inserting a memory card or flash memory unit will bring back the indicator light to steady green.

Record/Standby
Right grip trigger button



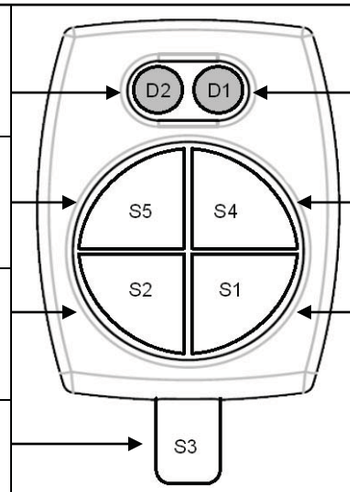
LEFT GRIP

D2 LED:
Camera: None

S5: Exp. Focus
Shift S5: Shutter On/Off

S2: Moment. AF
Shift S2: AF Toggle On/Off

S3: Shift Key



D1 LED:
Camera: None
Alarm : Blinking Red

S4: Gain Select
Shift S4: Gain On/Off

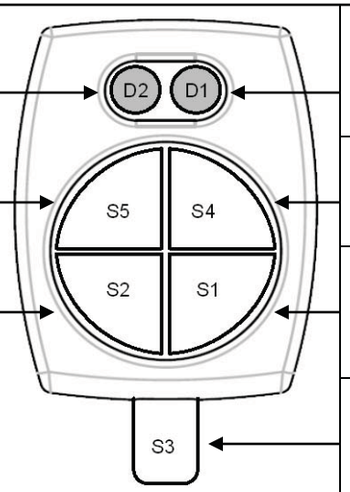
S1: Moment. Auto Iris
Shift S1: Iris A/M Toggle

RIGHT GRIP

D2 LED:
Camera : Solid Green
Rec. : Blinking Green
No Media: Solid Amber

S5: Fast Zoom W
Shift S5: WB "A"
Nav S5: Down

S2: Display Toggle
Shift S2: WB Preset
Nav S2: Left



D1 LED:
Camera Navigation : Solid Green
Alarm : Blinking Red

S4: Fast Zoom T
Shift S4: WB "B"
Nav S5: Up

S1: One Push WB
Shift S1: Auto/Manual WBToggle
Nav S1: Right

S3: -Power ON
-Record Start/Stop
Shift S3: Toggle Nav. Mode
Nav S3: Execute

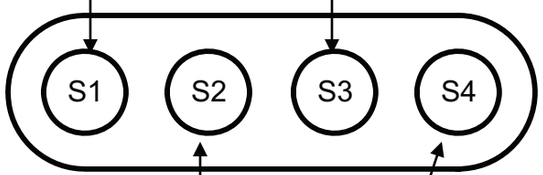
Right Wheel: Zoom W & T Vaiable Range
Shift Right Wheel: Manual Iris

Left Wheel: Focus N & F
Shift Left Wheel: Shutter Select Up/Down

MENU CONTROL PANEL

S1: Menu Toggle
Shift S1: Assign 4

S3: Assign 1
Shift S3: Assign 6
**** Hold For Test Mode Exit ****



S2: Picture Profile Toggle
Shift S2: Assign 5

S4: Assign 2
Shift S4: Power OFF
**** Test Mode At Power-Up ****